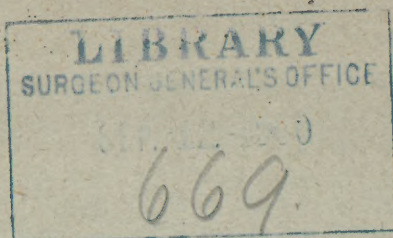


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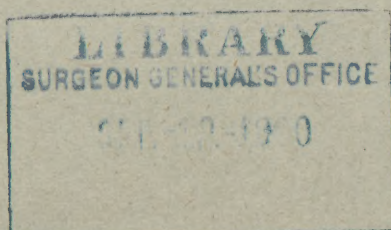
Chronic Appendicitis the Chief Symptom and
Most Important Complication of
Movable Right Kidney.

BY

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Reprinted from The Post-Graduate, February, 1899.



CHRONIC APPENDICITIS THE CHIEF SYMPTOM AND
MOST IMPORTANT COMPLICATION OF
MOVABLE RIGHT KIDNEY.*

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The writer would, at the outset, avoid the possibility of being misunderstood by presenting the following definition of the title and of his position: The title means just what it says, and is not intended to convey the impression that movable kidney is the only or even the most frequent cause of chronic appendicitis, albeit the latter half of this statement, as we hope to show farther on, is probably nearer the truth than is suspected by most people. The position taken and abundantly supported by the experience of the writer is that eight or nine cases out of every ten of movable *right* kidney causing decided symptoms have chronic appendicitis; in other words, that chronic appendicitis is one of the symptoms or pathological conditions present in from 80 to 90 per cent. of cases of *symptom-producing* movable right kidney. The writer knows this to be a fact as far as women are concerned. So far as his rather scant opportunities for observation among men enable him to judge, he has reason to believe that the same statement holds good also for the male sex.

The term chronic appendicitis, as used in the title of this paper, means that the development of the appendicitis dependent upon mobility of the right kidney is nearly always slow and insidious in character. Yet, although in the majority of cases the appendicitis does not pass beyond the stage fairly designated as chronic, we have in a certain number of cases seen repeated attacks of acute appendicitis implanted upon the chronic condition. These acute attacks have, as a rule, terminated in resolution or, to speak more correctly, in a return to the condition of chronic appendicitis. In a few instances, however, they have progressed to perforative and gangrenous appendicitis with the formation of periappendicular abscesses. But even these acute cases of appendicitis associated with movable right kidney have, in my experience, invariably been preceded by

* Read before the Clinical Society, December 16, 1898.

chronic appendicitis. Hence the use of the term *chronic appendicitis* in the title.

The distinction above made between cases of movable right kidney and cases of *symptom-producing* movable right kidney must ever and clearly be borne in mind. According to the writer's observations, about 20 per cent. only of all movable kidneys give their possessors decided trouble, and 80 to 90 per cent. of this 20 per cent., say 16 to 18 per cent. of all cases of movable kidney, have chronic appendicitis. Inasmuch as those most entitled to speak authoritatively on the subject, Glenard (8), Matthieu (11), Lindner (10) and others state that from 20 to 25 per cent. of all women have movable kidney or kidneys, and assuming for the purpose of our calculation the lower of these two figures, the correctness of which, by the way, is borne out by my own observations, we reach the following startling, but none the less true, conclusions. Of every 1000 women, 800 wear well-anchored kidneys, 160 have movable kidney or kidneys without suffering appreciably therefrom, and 40 possess movable kidneys producing more or less decided symptoms: From 80 per cent. to 90 per cent. of these 40, or 32 to 36 women in every 1000, have chronic appendicitis. This estimate embraces only the cases of appendicitis coexisting with movable right kidney, and does not take into account those cases of appendicitis occurring in the 800 women not afflicted with movable kidney.

The above clinical deductions regarding the frequency with which appendicitis is associated with movable right kidney find corroboration in the results of the author's operative work upon the kidney and upon the vermiform appendix. Up to the present writing (December 1, 1898) the writer has performed 150 nephropexies upon 115 patients, all but one of the latter being women. Examination of each patient for appendicitis began only with case 20, since it was only at about the date of this latter case that the writer had perfected his method of palpation of the vermiform appendix. This leaves 96 cases in which unilateral or bilateral nephropexy was performed available for the elucidation of the question before us. In 66 of these 96 cases of operative fixation of wandering kidney or kidneys, *i. e.*, in $68\frac{3}{4}$ per cent., appendicitis is noted as coexisting with mobility of the right or of both kidneys. This percentage, however, by no means represents all the appendicitis in these 96 cases of nephropexy, as in several of them the condition of the appendix was not noted, while the diagnosis of appendicitis was not hazarded in a few of the earlier cases, in which, after riper experience, I am now

quite certain it existed. As already stated, I am quite satisfied that between 80 per cent. and 90 per cent. of all cases of *symptom-producing* movable right kidney, it matters not whether or not the left kidney be movable in addition, are accompanied by and complicated with appendicitis. In 30 of the just noted 66 cases of appendicitis coexisting with mobility of the right or of both kidneys, both nephropexy, unilateral or bilateral, and removal of the appendix were performed by the writer, so that the diagnosis of appendicitis in these 30 cases at least was established by actual demonstration. In the remaining 36 cases the diagnosis of appendicitis rested upon the objective clinical signs of the presence of the disease.

With the object of obtaining an approximate idea of how often appendicitis occurs in women who do *not* possess movable kidneys, the writer has gone over the records of the last consecutive 139 operations for appendicitis, acute and chronic, performed by him. These cases stand beyond cavil or question as regards the diagnosis of appendicitis, since in all of them the diagnosis was verified by operation. These researches extend from the present writing back to the year 1893, and were discontinued when 139 cases of appendectomy had been reviewed simply because, when this number was reached, we had exactly 100 cases in which the presence or absence of movable kidney was distinctly noted in the history, no record of the mobility, or otherwise, of the kidney appearing in 39 cases.

The 139 cases embrace 130 women and 9 men. In none of the men was an examination for mobility of the kidney or kidneys made. The 100 cases of appendicitis, verified as such by operation, and in which at the same time the kidneys were examined for mobility, all occurred in women. In these 100 cases neither kidney was movable in 19, the right kidney alone was movable in 43, and both kidneys were movable in 38. In other words, of 100 women operated upon for appendicitis, acute or chronic, only 19 had normally fastened kidneys, while 81 had mobility of the right or of both kidneys.

The deductions drawn from an analysis of these 100 cases ought to be correct. In all of them the existence of appendicitis was proven by operation. In 30 of them the mobility of the right or of both kidneys was likewise demonstrated by operation. The recognition of a movable kidney, with the patient in the erect posture, is so easy and certain that the diagnosis of mobility of one or of both kidneys in the remainder of the 81 cases ought to go unchallenged.

Going back now to our above stated statistics, which show that from 32 to 36 out of every 1,000 women have appendicitis, associated

with, and probably dependent upon, movable right, or right and left, kidney, and adding thereto 19 per cent., as representing the number of women who have appendicitis *without* having movable kidney, we have a round total of from 39 to 44 women out of every thousand, say 4 per cent. of all women, suffering from appendicitis.

To summarize : 20 per cent. of all women have mobility of one or of both kidneys ; 4 per cent. of all women have *symptom-producing* movable kidney. Four per cent. of all women have appendicitis. About $3\frac{1}{2}$ per cent. of all women have both *symptom-producing* movable kidney and appendicitis. About one-half per cent. only of all women have appendicitis and well anchored kidneys.

The importance of the entire subject of movable kidney and appendicitis and of the relations existing between the two is apparent from the most casual consideration of the above figures which, moreover, are *not* at all in harmony with the generally received opinion that appendicitis is infrequent in women.

The abnormalities found in and about the appendix in the 81 cases of operation for appendicitis associated with mobility of one or of both kidneys illustrated almost every shade and variety of appendicitis and its sequelae, running through the scale from simple catarrh of the appendix up to acute inflammation with gangrenous destruction of the entire appendix. A few of the mildest cases were characterized simply by hyperaemia, symmetrical thickening and succulence of the appendix, with, perhaps, increased vascularization and hypernutrition of the meso-appendix. The vast majority of the cases presented, in every conceivable combination, irregular thickening of the walls of the appendix by inflammatory infiltrates, single and multiple strictures and kinking of the appendix with formation and retention of faecoliths, peritoneal thickenings and exudates upon the appendix and in its vicinity, peritoneal adhesions of all sorts, ulceration of the appendicular mucous membrane, appendicitis obliterans, in short, all the different forms and stages of chronic and acute appendicitis, inclusive of one case of tuberculosis of the appendix.

As already stated, in 30 of these 81 cases of operation for appendicitis coexisting with movable kidney or kidneys, nephropexy, right or bilateral, was also performed. The appendix operation, in period of time, preceded nephropexy in 9 and followed it in 12 cases. In 9 cases the two operations, appendectomy and right or bilateral nephropexy, were performed simultaneously. One very movable right kidney, in addition, was incidentally and accidentally anchored as the result of an operation for appendicitis. The diseased

appendix, in this case, reached upward to the lower surface of the liver. In enucleating the appendix, the lower half of the right kidney, the psoas muscle and the anterior face of the quadratus lumborum were laid bare, and drainage was established from these points directly backward through the loin. As a result of the adhesions thus created the formerly movable right kidney was found securely anchored five months after the operation for appendicitis. In 8 of these 30 cases the diseased appendix was excised. In 22, inversion of the entire, unopened appendix, after the method described by the writer (6), was performed.

It has already been stated and an attempt made to corroborate the statement, that the position assumed by the writer and supported by the figures just given is based upon sufficiently ample personal clinical and operative experience. Were the writer less certain of his position than he is, it would be almost criminal to preach the new doctrine enunciated in the title of this paper, far-reaching in its practical effects as it must become when followed to its legitimate conclusions. It is with a full and realizing sense of the responsibility involved that this paper is presented to the profession. It sums up the result of years of unremitting and, we venture to assert, conscientious observation in the every day practice of gynecology and abdominal surgery.

For the past nine years the writer has examined for the existence, or otherwise, of movable kidney practically every woman who has consulted him. For nearly six years past the condition of the vermiform appendix, whether normal or abnormal, has likewise been investigated and noted in practically every one of the writer's patients. The conclusions reached, based as they are upon the careful and painstaking examination of thousands of women, during many years, can scarcely be assailed as hasty, especially when confirmed, as we have seen they are, by the crucial test and the results of the author's operative work.

The writer first called attention to the relations existing between movable kidney and appendicitis, in 1894, in a paper read before the New York Obstetrical Society (5). The original observations therein contained, however, stood solitary, and scarcely received the attention which the importance of the practical deductions flowing therefrom merited. This was possibly due to the method of publication selected, the subject being handled as a paragraph or section merely of an article whose title scarcely intimated the nature of its contents. As further experience has but served to confirm the

truth and practical importance of his original observations, the writer has considered it his duty to again call attention to the matter under a more direct and striking caption.

Previous to the publication of my just-mentioned paper calling attention, among other things, to the relations of movable right kidney and appendicitis, Newhall (12) recorded a case of movable right kidney which had been previously treated for appendicitis by another physician, and Bassford (1) mentions a case of appendectomy for chronic appendicitis, in which the attacks continued after operation, and in which, later, a movable right kidney was diagnosed. Following the appearance of my publication, Noble (13) reported six cases of appendicitis, two of which were associated with movable right kidney; Bevell (2) and Ross (14) each mention a case of movable right kidney, in which appendicitis had been diagnosed by other physicians; and Watson (16), in reporting "a case of ablation of an inflamed appendix adherent to right kidney, lumbar nephrolithotomy and lumbar nephropexy," concludes, "that the adhesion of the appendix to the lower end of the kidney, from a long standing process, suggests that in this particular case the displacement of the kidney may have occurred because of the connection with the appendix." It will be observed that all of the writers mentioned fail to recognize the dependence of the appendicitis upon the movable right kidney, Watson even reversing cause and effect and holding the appendicitis responsible for the displacement of the kidney.

Beck (3), in a very able recent article, is the only authority I have been able to find who admits the at least occasional dependence of appendicitis upon movable right kidney. He details, in illustration, three cases in which he operated for appendicitis. In the first and second a movable right kidney was found compressing the appendix against the ilium at each inspiration. In the third case a movable right kidney pressed upon the coecum and through it upon the appendix. From this experience of three cases of associated movable right kidney and appendicitis, Beck follows the writer in attributing the appendicitis to the movable kidney, but differs from him in his interpretation of the *modus operandi* by which this is accomplished, considering the appendicitis the result of direct pressure of the movable kidney on the appendix. Opposed to this interpretation, based upon the observation of three cases, is the fact noted by the writer in the examination of several hundreds of cases of associated movable kidney and appendicitis, namely, that the

appendicitis is an early feature of the clinical history of movable right kidney, being found again and again in cases in which the very limited range of mobility of the kidney absolutely precludes the possibility of its descending far enough to press upon the appendix.

This holds true also of probably the majority of the 81 cases of appendicitis associated with mobility of the right or of both kidneys, in which the writer has performed appendectomy. In many of them the *lamina fibrosa* of the fatty capsule was so stretched as to allow the right kidney to descend even lower than the point of origin of the appendix from the coecum; nevertheless, the kidney was at no time found resting directly upon the appendix. Nor, except in the case of adhesions binding down the displaced kidney, would we expect this, since the natural tendency of a very movable right kidney is to retire to its normal site with the patient upon the back, and to sink downward and forward in the direction of the anterior abdominal wall in the erect posture.

The above embraces all the references to the subject of the connection between movable right kidney and appendicitis which I have been able to find in quite an extensive research of the literature, especially that of movable kidney. As a matter of fact, satisfactory investigation of the relations of movable kidney and appendicitis became possible only after the discovery and elaboration by the writer of his method of palpation of the vermiform appendix.

With its publication (4) a new era may fairly be said to have been inaugurated in the diagnosis of appendicitis. Whereas formerly we could only make a guess, more or less shrewd, at the existence of chronic appendicitis from the history, past and present, of the patient, we are now enabled to diagnosticate by positive and reliable physical signs between a normal and an abnormal vermiform appendix, and to recognize with absolute certainty even the very earliest stages of appendicitis. Knowledge of how to palpate the appendix is imparted and acquired with relative facility, as the writer has had abundant opportunity to note with his classes at the Post-Graduate School, and comparatively little practice is required to attain a fair degree of expertness. Surgeons of the standing of John B. Murphy, Howard A. Kelly (9), George F. Shrady (15), Robert T. Morris, Carl Beck (3), Herman Mynter and others, have, to the writer's personal knowledge, adopted the method and depend upon it for the diagnosis of chronic appendicitis. The writer numbers among his personal friends and pupils quite a number of general practitioners who have become experts in palpation of the vermiform appendix.

In asking for a corroboration or otherwise of the correctness of his observations on the relations of movable kidney and appendicitis the writer must demand as an essential condition and prime postulate that his censor first practically familiarize himself both with palpation of the vermiform appendix, so as to be able to distinguish between a normal and a diseased appendix, and with examination for movable kidney with the patient in the erect posture, so that no case of movable kidney will go undetected. Next he should make it a rule to examine every patient both for movable kidney and appendicitis. Unless he complies with both of the above postulates he will be doing justice to neither his subject, his patient nor himself.

The writer is convinced that some of the symptoms ascribed to a movable kidney are often in reality due rather to the concomitant chronic appendicitis. This is especially true of pain in the right groin and assumed pain in the kidney itself, symptoms so frequently noted by writers on the subject of movable kidney. Not above ten per cent. of movable kidneys, producing symptoms, or about two per cent. of all movable kidneys, are either sensitive on pressure or cause pain by direct pressure on surrounding parts. The associated pain, as demonstrated by palpation of the appendix, is almost invariably due to the coexisting chronic appendicitis.

Chronic appendicitis may, indeed, be the *only* symptom present in a case of movable right kidney, and with the operative removal of the appendix all symptoms may disappear, although the mobility of the kidney remains as before operation. On the other hand, operative fixation of a movable kidney may result in anatomic success without relieving the patient in any way, the symptoms present being due entirely to the concomitant and untreated appendicitis. The most careful and painstaking investigations of the final results of nephropexy for movable kidney which we possess are those made by Wolff (17) in E. Rose's cases. While the anatomic result was almost invariably all that could be desired, the therapeutic result, in a large proportion of the cases, was marred by the persistence of pain in the right lower abdomen, accompanied in one case by the development of a swelling in the right iliac fossa and fever. Wolff does not even attempt an explanation of these phenomena, which the writer, judging from his own parallel experience in similar cases, has no hesitation in ascribing to appendicitis.

The writer has never seen a spontaneous cure, with restoration of a normal appendix, in the chronic appendicitis accompanying

movable kidney, except in the cases, to be hereafter mentioned, in which a permanent cure of the appendicitis followed right or bilateral nephropexy. The only road to spontaneous cure of the appendicitis, outside of fixation of the right kidney, is the long, tedious and perilous one ending in *appendicitis obliterans*.

It has already been stated and proven as far as the writer's observations and statistics go, that the relation between movable kidney and appendicitis is that of cause and effect; in other words, that the appendicitis is the direct result of the movable right kidney. I say *right* kidney advisedly, both on account of the theory of causation of the appendicitis in these cases which I have advanced, and because of the fact that in over 2000 patients with movable kidney whom I have examined I have found the left kidney alone movable in *none*, and more movable than the right in only three cases of mobility of both kidneys. I have, moreover, had a number of opportunities to observe the successive development in the same woman, in the order named, of movable right kidney, chronic appendicitis, and movable left kidney. In other cases the right kidney became movable, chronic appendicitis followed, and the left kidney remains in place. I have, in addition, witnessed the spontaneous cure of catarrhal appendicitis after right nephropexy, the left kidney subsequently becoming movable without the recurrence of appendicitis. All of which facts go to prove the dependence of the associated appendicitis upon mobility of the *right* kidney.

How does a movable right kidney produce appendicitis? The answer to this question must, for the present, remain largely a matter of theory and conjecture. The writer still inclines to the plausibility and probable correctness of the explanation several years ago advanced by him (5), and which he takes the liberty of here reproducing :

"The writer believes that the movable right kidney is directly responsible for the appendicitis in the vast majority of these cases of co-existence of the two affections. Nor is this casual relation very difficult to understand when we consider the vascular supply of the appendix, and the way it must be interfered with by a movable right kidney. The appendix vermiformis receives its blood supply from the ileo colic branch of the superior mesenteric artery. Its blood is returned by way of the superior mesenteric vein, the large trunk of which 'ascends along the right side and in front of the corresponding (superior mesenteric) artery, passes in front of the transverse portion of the duodenum, and unites behind the upper border of the pancreas with the splenic vein to form the vena portae.' (Gray.)

"One of the first things a movable right kidney must do is to dislocate the duodenum and head of the pancreas, compressing the superior mesenteric vessels

between the head of the pancreas and the bodies of the spinal vertebrae. The interference with the circulation of the appendix caeci soon leads to chronic congestion of the organ, and that once established the way for appendicitis is paved."

It may be objected to this explanation that the same obstruction to the return circulation which affects the appendix must also affect the caecum and cause chronic colitis. Granted. It is not difficult to conceive, however, that a moderate degree of congestion, which may be permanently fatal to the health of the appendix with its narrow lumen, may be a matter of comparative unimportance in as far as it affects the walls of the large-calibered caecum.

An observation confirmatory of the probable correctness of the above explanation of the way in which a movable right kidney produces appendicitis is afforded by the fact that a loose right kidney entering upon a downward and outward, instead of a downward and inward, career rarely produces either marked symptoms or appendicitis.

The most convincing proof, however, of the dependence of the appendicitis upon movable right kidney is afforded by the behavior of the diseased appendix after right or bilateral nephropexy. During the first half of the current year the writer essayed the task of investigating the subsequent fate of all the patients he could by any means reach, on whom he had performed nephropexy. Among these patients there were 58 who, in addition to having mobility of one or both kidneys, were recorded as suffering from appendicitis, either chronic or the acute implanted upon the chronic form. In the 58 patients the writer had in 24 successfully removed the diseased appendix, either before or after or at the same sitting with unilateral or bilateral nephropexy. Of the remaining 34 patients, 22 were still suffering from chronic appendicitis when last seen and examined. The balance, 12 patients in all, recovered fully and permanently, and without further treatment directed to the appendix, from their chronic appendicitis, after operative fixation of the right or of both kidneys. Whether they recovered by progress of the appendicitis to the obliterating stage above alluded to, or whether a catarrhal appendicitis underwent resolution and ended in permanent recovery with a normal appendix, I am, of course, unable to say. The probability, to my mind, however, is that the latter was the course pursued by the appendicitis in the majority, if not in all, of these 12 cases. The patients recovered from the appendicitis in periods varying from six months to two years after nephropexy, whereas, according to my experience, a considerably longer time is, on the average, required to reach the stage of appendicitis obliterans.

These instances of recovery from appendicitis, following right or bilateral nephropexy, while almost absolutely proving the dependence of the appendicitis upon movable right kidney, also bring up the interesting practical question: In which cases of associated appendicitis and movable right kidney may a disappearance of the appendicitis be hoped for after right or bilateral nephropexy? If the above hypothesis of a reversion of a catarrhal appendicitis to a normal condition of the appendix be correct, it follows that a spontaneous and reasonably speedy cure of appendicitis after nephropexy may be expected only in those cases in which the appendicitis has not progressed beyond the catarrhal stage; in other words, in those cases in which the chronic appendicitis has existed but a short time. As a matter of fact, in none of my 12 cases of spontaneous recovery from appendicitis after nephropexy had the appendicitis, either to my personal knowledge or judging from the history, existed for longer than a year.

So convinced am I of the dependence of the chronic appendicitis upon the movable right kidney in those cases in which these affections are associated, that I have almost, if not quite, come to regard the condition of the vermiform appendix as the key to the situation when confronted by the problem as to whether a given movable kidney requires operation or not. Of course, other elements enter into the decision, but this rule, at least, holds inflexibly good in my practice. Given a patient with movable right kidney and appendicitis nephropexy is *nearly always* indicated, whereas the indication for appendicitis *may* not be so imperative. This depends upon the fact, already noted and illustrated in twelve of my cases, that the appendicitis, *if recent*, may disappear without further ado after its cause, mobility of the right kidney, has been removed by nephropexy. Exceptionally only, in those comparatively rare cases already alluded to in which the appendicitis appears to be the *only* symptom of movable right kidney, appendectomy may be performed and the mobility of the kidney disregarded. In general, however, the best interests of the patient will be consulted by operating for both movable kidney and appendicitis, preferably at the same sitting and through one and the same lumbar incision.

The lumbar operation for chronic appendicitis, or rather, the simultaneous fixation of a movable right kidney and removal of a chronically diseased appendix through the lumbar nephropexy incision, was conceived and first put into execution by the writer (7) to meet just the class of cases we have been discussing this

evening. The writer's experience with the operation dates from June, 1898, and is rather limited, embracing only eight cases, in four of which lumbar operation of the appendix was performed at the same sitting with right, and in four with bilateral nephropexy. The only indication for the operation, which I hope to report upon again after a riper experience, is given by the co-existence of symptom-producing movable right kidney and appendicitis.

SUMMARY.

Chronic appendicitis, as proven by the writer's clinical and operative work, is present in from eighty to ninety per cent. of women with *symptom-producing* movable right kidney. This frequency constitutes chronic appendicitis one of the chief, if not *the* chief, symptom of movable kidney.

Chronic appendicitis, by reason of its frequency, the protracted suffering and serious impairment of health which it entails, and the dangerous possibilities of implanted acute attacks of appendicitis, may be considered the most important complication of movable right kidney.

The writer's statistics show : that twenty per cent. of all women have movable kidney or kidneys ; that four per cent. of all women have *symptom-producing* movable kidney or kidneys ; that four per cent. of all women have appendicitis ; that, while three and one-half per cent. of all women have both *symptom-producing* movable kidney and appendicitis, only one-half per cent. of all women have appendicitis and well anchored kidneys. The startling nature and importance of the conclusions to be drawn from these statistics does not invalidate the latter.

Satisfactory investigation of the relations of movable kidney and appendicitis became possible only after the discovery and elaboration of the writer's method of palpation of the vermiform appendix. It remains impossible to those not practically familiar with the method.

Chronic appendicitis may be the *only* symptom of movable right kidney.

Some of the symptoms commonly ascribed to movable kidney are often in reality due to the concomitant appendicitis.

The relations existing between movable *right* kidney and chronic appendicitis are those of cause and effect, for reasons detailed in the paper. A movable *left* kidney never produces appendicitis.

Movable right kidney probably produces chronic appendicitis

by indirect pressure upon the superior mesenteric vein, the return circulation of the appendix being hampered by compression of the vein between the head of the pancreas and the spinal column.

Chronic appendicitis associated with movable kidney shows no tendency to resolution or spontaneous cure, with restoration of a normal appendix, while the right kidney remains movable. The only cure possible, under these conditions, is by slow progress to appendicitis obliterans.

In twelve of the writer's cases of coexisting movable right kidney and appendicitis, the appendicitis apparently ended in resolution and remained permanently cured, after right or bilateral nephropexy, without any attention to the appendix.

Recovery from appendicitis after right nephropexy may only be expected in cases in which the associated chronic appendicitis is of comparatively recent origin.

In a minority of cases only of associated movable right kidney and chronic appendicitis will either nephropexy alone, or appendectomy alone, meet *all* the indications. The majority of patients require both operations to restore them to *full* health.

Both operations, right nephropexy and appendectomy, may be simultaneously performed through one and the same lumbar incision extending along the outer margin of the erector spinae muscle from the twelfth rib to the crest of the ilium.

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